

End of Life Care Trajectories – Hospital Inpatient Care in Last Two Years of Life

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Motivation

- End of life (EOL) care trajectories have been found to differ by **cause of death** categories (terminal illness, organ failure, frailty, sudden death, other) representing different **trajectories of functional decline** (Fassbender et al. 2009).
- The aim of our study is to use the same categorisation of causes of death to investigate hospital inpatient care utilisation patterns in the last two years of life in Norway.

Data and Methods

- Data for all decedents in 2011 from the **Norwegian Cause of Deaths Registry** were linked by unique person identifier with data from **Norwegian Patient Registry** on inpatient hospital utilisation in the last two years before death.
- Graphical analysis of time pattern in service use before death, by cause of death trajectories (terminal illness, organ failure and frailty), age at death (0-69, 70-79, 80-89 and 90+) and place of death (hospital, nursing home, home).

Results

- The extent of hospital inpatient service use over the last two years of life vary between cause of death trajectory groups:
 - Service utilisation (days, admissions) was highest for terminal illness, followed by organ failure, and lowest for frailty.
 - For all trajectory groups the proportion being in hospital increases steeply in the last months and weeks of life, starting earlier for terminal illness.
 - For terminal illness the share of total hospital days were more concentrated in the 2-26 weeks before death.
- The number of days in hospital decreased with higher age.
- For most age and trajectory groups, the highest number of hospital days was found for hospital deaths, followed by nursing home deaths, and lowest for home deaths. The latter two groups have few days in hospital the last week of life.

Figure 2 Hospitalisation last two years of life, by trajectory. Age 70-79

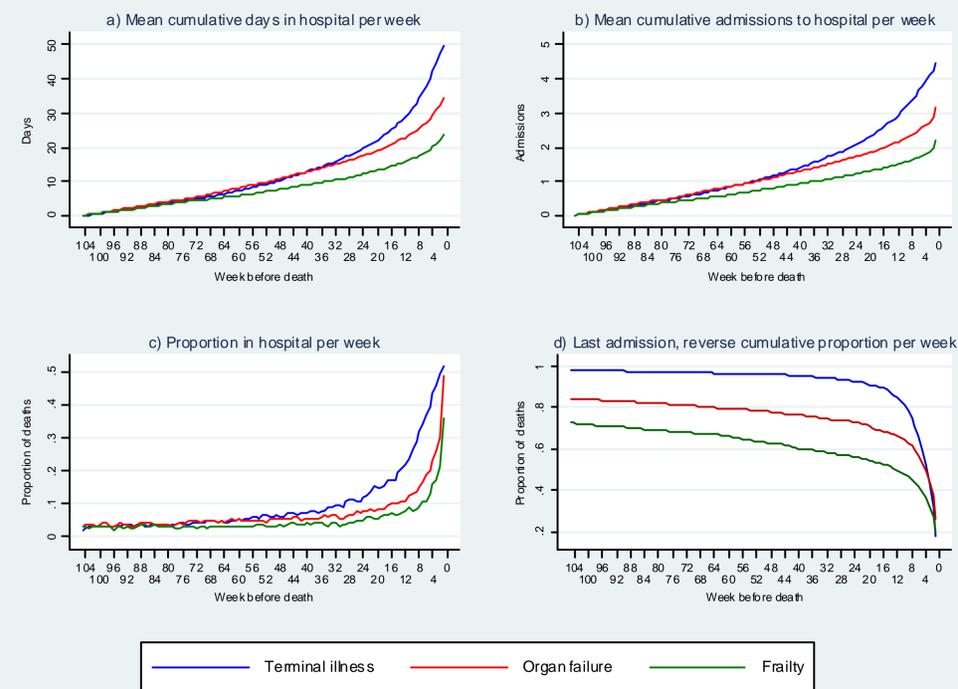
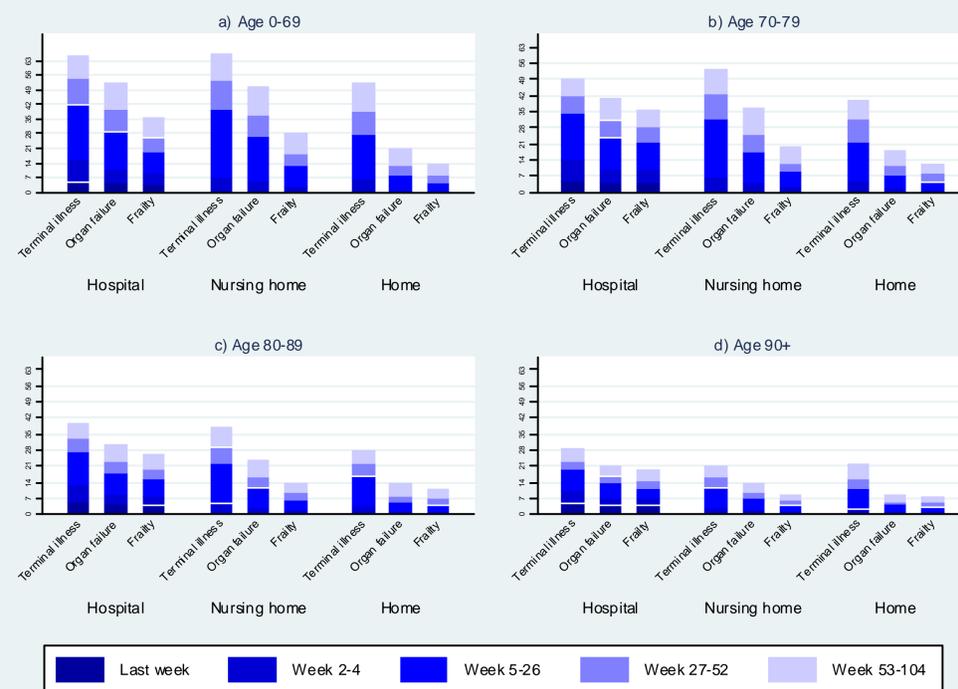


Figure 2 Days in hospital last two years of life, by trajectory, age and place of death



Discussion

- The overall results are in line with the findings in Fassbender et al. (2009) which found the same ranking of cost of inpatient care between terminal illness, organ failure and frailty.
- Care trajectories differ by place of death already years before death, which could reflect that place of death is an indication of differences in functional decline of decedents within the cause of death trajectory categories.
- Nursing homes have become an increasingly more frequent place of death in Norway (Kalseth and Theisen, 2017), due to aging population and a shift in place of end of life care especially for cancer patients.

Conclusions

- Cause of death trajectory categories help to differentiate patterns of hospital utilisation before death.
- Care trajectories should be studied separately for different age groups.

Further Research

- The next step in our work is to include other health and care services, such as primary health care, home care, residential care, and prescription drugs, that could serve as alternatives as well as supplements to hospital admission.

References

- Fassbender K, Fainsinger RL, Carson M and Finegan BA. Cost trajectories at the end of life: the Canadian experience. *J Pain Symptom Manag.* 2009; 38: 75-80
- Kalseth J and Theisen OM. Trends in place of death: The role of demographic and epidemiological shifts in end-of-life care policy. *Palliative Med.* 2017: 0269216317691259

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